

## CLAIMS

What is claimed is:

1. A method of using a hardware device to directly start a PDA OS in a portable computer, which comprises the steps of:

- 5           A. providing a PDA hot key for a user to depress to start the PDA system;
- B. providing a PDA OS, which is pre-loaded into a storage device of the portable computer for providing a PDA operating environment in the portable computer;
- 10          C. providing a PDA booting procedure, which is pre-loaded into a BIOS chip of the portable computer for starting the PDA OS; and
- D. providing a button detecting procedure, which is pre-loaded into the BIOS chip of the portable computer for running the PDA booting procedure when the PDA hot key is detected to be depressed.

15          2. The method of claim 1 further comprising the step of installing a basic OS in the portable computer starting the basic OS.

3. The method of claim 2, wherein the step of installing a basic OS in the portable computer starting the basic OS comprises the steps of: pre-loading a basic OS into the portable computer, a booting procedure for starting the basic OS, and its utilities and the portable computer has a power on button for starting the pre-loaded basic OS.

20          4. The method of claim 2 comprising the steps of:

- A. loading the pre-loaded PDA OS to main memory when the PDA hot key is depressed;

- B. starting the PDA OS and running its utilities;
- C. running a POST (Power On Self Test) procedure when the power on button is depressed;
- D. loading the basic OS into the main memory; and
- 5 E. starting the basic OS and running its utilities.

5. The method of claim 4, before the step of loading the pre-loaded PDA OS into the main memory, further comprising the steps of:

- A1. reading information about the OS's already loaded into the storage device of the portable computer from an MBR (Master Boot Record);
- 10 A2. determining whether there are multiple OS partitions, and continuing to the next step when there are multiple OS partitions and to step C otherwise;
- A3. detecting a PDA OS in the multiple OS partitions; and
- A4. determining whether there is a PDA OS associated with the PDA hot key, and continuing to step A to start the PDA OS and to run its utilities if there is and
- 15 to step C to start the basic OS and its utilities for the portable computer.

6. A system using a hardware device to directly start a PDA OS in a portable computer, comprising:

a PDA OS stored in a storage device of the portable computer;

utilities for the PDA OS;

20 a PDA hot key for directly starting the PDA OS;

a PDA booting procedure, which is pre-loaded into a BIOS chip of the portable

computer for starting the PDA OS and the PDA utilities;

drivers for the PDA OS; and

a button detecting procedure, which is pre-loaded into the BIOS chip of the portable computer for running the PDA booting procedure when the PDA hot key is detected to be depressed.

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7. The system of claim 6 further comprising a basic OS (such as the Windows OS) pre-loaded into the portable computer, a booting procedure of the basic OS, utilities of the basic OS, drivers of the basic OS, and a power on button for starting the basic OS, wherein the basic OS is started after the power on button is detected to be depressed by the button detecting procedure.

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